

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Confirmation No.: 3344

Toshiharu KOBAYASHI, *et al.*

Serial No.: 10/537,477

Group Art Unit: 1793

Filed: June 3, 2005

Examiner: Caitlin Anne Fogarty

For: NI-BASED SINGLE CRYSTAL SUPER ALLOY

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VIA EFS-WEB

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

**DECLARATION UNDER 37 C.F.R. §1.132**

Sir:

I, Hiroki Yokota, do hereby declare as follows:

1. I have been employed from April, 2000 until the present in the Research and Engineering Division, Aero-Engine & Space Operations, of Ishikawajima-Harima Heavy Industries Co., Ltd. ("IHI Corporation"), which is a co-assignee of the present invention and application. My duties at the IHI Corporation involve research and experimentation in the field of Material Technology.
2. I received a Master of Science degree from the Tokyo Institute of Technology, located in Tokyo, Japan, in 2000.
3. By me and/or under my direction and control a series of experiments was carried out on October 26, 2009 at the IHI Corporation plant located at Mizuho, Japan. The purpose of these experiments was to generate the data that is plotted on Fig. D which, I am informed, is being submitted as an attachment to an Amendment that is to be filed in the United States Patent and Trademark Office by the U.S. patent counsel representing the applicants in this case. Another copy of Fig. D is attached as an exhibit to this declaration.
4. In the experiments referred to in Paragraph 3 above, a computer simulation was carried out with the use of a simulation software known as J-Mat Pro, version 5.0, in which the data contained in Fig. D was generated and plotted. More

particularly, the composite ratio of Mo in an alloy having the composition based on an embodiment according to an embodiment in accordance with claim 1 of the present application was varied between the values of 0 to 5.0 wt % and the creep rate of each of the subject alloys was simulated. The results of this simulation was, thus, plotted in Figure D.

5. I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: December 2, 2007

By: Hiroki Yokota  
Mr. Hiroki Yokota

Enclosure: Fig. D

FIG. D

